

WHAT IS CLAIMED IS:

1. A process for producing a heat-resistant resin film having a metallic thin film, comprising the steps of:

coating a substrate with a releasing agent;

forming a metallic thin film thereon;

forming a layer containing a heat-resistant resin thereon; and

peeling an accumulated body containing the layer of heat-resistant resin and the metallic thin film from the substrate.

2. The process for producing a heat-resistant resin film having a metallic thin film as claimed in claim 1, wherein a surface of the metallic thin film is subjected to a chemical etching treatment before forming the heat-resistant resin layer.

3. A process for producing an endless belt having a metallic thin film, comprising the steps of:

forming a metallic thin film on an inner surface of a cylindrical substrate;

forming a layer containing a heat-resistant resin thereon; and

peeling an accumulated body containing the heat-resistant resin layer and the metallic thin film from the substrate.

4. The process for producing an endless belt having a metallic thin film as claimed in claim 3, wherein a surface of the substrate is coated with a releasing agent before forming the metallic thin film.

5. The process for producing an endless belt having a metallic thin film as claimed in claim 3, wherein a surface of the metallic thin film is subjected to a chemical etching treatment before forming the heat-resistant resin layer.

6. The process for producing an endless belt having a metallic thin film as claimed in claim 3, further comprising the step of:

applying a compression force to the accumulated body of the metallic thin film and the layer of heat-resistant resin peeled off from the substrate in a thickness direction thereof.

7. The process for producing an endless belt having a metallic thin film as claimed in claim 3, wherein the step of forming the layer containing a heat-resistant resin comprises the steps of:

forming a layer of a polyamide acid solution on the metallic thin film; and
subjecting the layer to imidization by heating to form a film member containing polyimide.

8. The process for producing an endless belt having a metallic thin film as claimed in claim 3, wherein the step of forming the layer of a heat-resistant resin comprises the steps of:

placing a polyamide acid solution in an interior of the cylindrical substrate;
rotating the cylindrical substrate in a circumferential direction to make the solution be a layer on the metallic thin film; and
subjecting the solution to imidization by heating to form a film member containing polyimide.

9. The process for producing an endless belt having a metallic thin film as claimed in claim 3, wherein the step of forming the layer of a heat-resistant resin comprises the steps of:

placing a polyamide acid solution in an interior of the cylindrical substrate;
rotating the cylindrical substrate in a circumferential direction to make the solution be a layer on the metallic thin film; and
subjecting the solution to imidization by heating to form a film member containing polyimide, and wherein a porous film of a fluorine resin or a nonwoven

fabric of a heat-resistant resin is arranged to closely attach to an inner surface of the substrate before forming the layer of the polyamide acid solution.

10. The process for producing an endless belt having a metallic thin film as claimed in claim 3, wherein the step of forming the layer of a heat-resistant resin comprises the steps of:

forming a layer of a polymer solution of aromatic polyamide on the metallic thin film; and

removing a solvent contained in the solution.

11. The process for producing an endless belt having a metallic thin film as claimed in claim 3, wherein the step of forming the layer of a heat-resistant resin comprises the steps of:

placing a polymer solution of aromatic polyamide in an interior of the cylindrical substrate; and

rotating the cylindrical substrate in a circumferential direction.

12. The process for producing an endless belt having a metallic thin film as claimed in claim 3, wherein the step of forming the metallic thin film comprises the step of:

conducting electroplating or electroless plating on an inner surface of the cylindrical substrate.

13. The process for producing an endless belt having a metallic thin film as claimed in claim 3, wherein the step of forming the metallic thin film comprises the step of:

attaching a metallic foil on an inner surface of the cylindrical substrate.

14. The process for producing an endless belt having a metallic thin film as claimed in claim 3, further comprising the step of:

forming a layer of a heat-resistant resin on an outer surface of the accumulated body of the metallic thin film and the layer of heat-resistant resin peeled off from the substrate.

15. An endless belt having a metallic thin film produced by a process comprising the steps of:

forming a metallic thin film on an inner surface of a cylindrical substrate;

forming a layer containing a heat-resistant resin thereon; and

peeling an accumulated body containing the layer of heat-resistant resin and the metallic thin film from the substrate.

16. The endless belt as claimed in claim 15, wherein the heat-resistant resin film is produced by forming a layer of a polyamide acid solution on the metallic thin film, and conducting imidization by heating to form a layer containing a polyimide heat-resistant resin.

17. The endless belt as claimed in claim 15, wherein the metallic thin film is produced by forming a metallic thin film by conducting electroplating or electroless plating on an inner surface of the cylindrical substrate.

18. An endless cylindrical belt having a metallic thin film, comprising:
a layer containing a heat-resistant resin on an inner surface of the metallic thin film, the metallic thin film being a metallic foil, the metallic thin film having a junction of joining both ends of the metallic thin film, and the layer of a heat-resistant resin having no junction.

19. The endless belt having a metallic thin film as claimed in claim 18, wherein an electric junction aid in a form of an electroconductive paste is inserted between the overlapping both ends of the metallic thin film at the junction of the metallic thin film.

20. An apparatus for forming an image, comprising:

an image carrier, in which a latent image caused by differences in electrostatic potential is formed on an endless surface thereof;

a developing unit developing the latent image by attaching toner powder containing a thermoplastic resin to the image carrier;

an intermediate transfer member, on which a toner image formed on the image carrier is temporarily transferred; and

a transferring and fixing unit heating the toner image on the intermediate transfer member and press-fixing the molten toner image on a recording medium, wherein the intermediate transfer member is the endless belt according to claim 18, and the transferring and fixing unit contains an electromagnetic induction coil arranged to face the intermediate transfer member.